

($p=0.08$). In a mean follow up of 5.5 years, there were 215 (48%) deaths. Statin therapy was associated with improved long-term survival ($p=0.004$) on Cox hazard regression, controlling for comorbidities, age, beta-blocker use, and operative year. **Conclusion:** Preoperative statin therapy is associated with a shorter length of stay, improved long-term survival, and a trend towards fewer perioperative CV complications in pts undergoing infra-inguinal vascular surgery.

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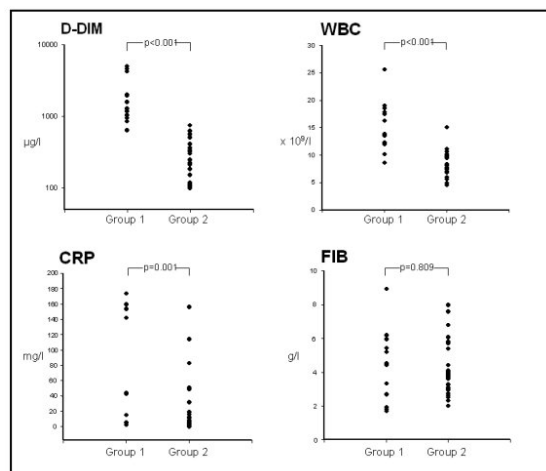
Usefulness of Plasma Fibrin D-Dimers for Differentiation of Acute Versus Chronic Aortic Dissection

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Background: Discrimination between acute and chronic aortic dissection (AD) has important prognostic and therapeutic implications, but is frequently difficult in the clinical setting. This study evaluated the usefulness of plasma fibrin D-dimer levels and biomarkers of inflammation to differentiate between acute and chronic AD.

Methods and Results: Blood samples from 38 consecutive patients with acute (group 1, $n=12$) and chronic (group 2, $n=26$) AD were tested for plasma fibrin D-dimers, white blood cell (WBC) count, C-reactive protein (CRP), and fibrinogen. White blood cell count and CRP levels were significantly higher in group 1 compared to group 2 ($15.4 \pm 4.7 \times 10^9/l$ vs. $8.1 \pm 2.2 \times 10^9/l$, $p<0.001$; and 88 ± 74 mg/l vs. 24 ± 38 mg/l, $p=0.001$, respectively), with considerable overlap between both groups. Group 1 patients had significantly higher levels of plasma D-dimers compared to group 2 patients (2094 ± 1562 $\mu g/l$ vs. 275 ± 170 $\mu g/l$, $p<0.001$). ROC curve analysis yielded an optimal cutoff value of 627 $\mu g/l$ for D-dimer levels with a sensitivity of 100% and specificity of 96% for the presence of an acute disease state of AD.

Conclusion: Measurement of D-dimers is a widely available laboratory test which allows to discriminate between acute and chronic AD with high accuracy once the diagnosis has been made.



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Prevalence and Clinical Correlates of Symptomatic Peripheral Arterial Disease in Italy

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Background. Epidemiology of peripheral arterial disease (PAD) was studied almost exclusively in Northern European and Northern American populations. Thus, it is unclear what is the magnitude of the problem in other countries. We report the first survey in Italy to describe the prevalence of symptomatic PAD and its relationship with cardiovascular risk factors and other diseases.

Methods. From the lists of 7 general practitioners, all subjects living in a well defined area of Southern Italy were identified who were aged 40-80 years ($n=4352$). All of them received a Rose questionnaire (RQ) which was completed by 3699 subjects. In those referring pain in the calf that began while walking and did not disappear continuing to walk, regardless of whether the other Rose criteria were met ($n=760$), ankle/brachial index (ABI) was measured, and the presence of PAD defined by ABI <0.90 .

Results. The prevalence of symptomatic PAD was 1.6% (2.4% in men, 0.9% in women). For each PAD patient, 3 controls matched for sex and age were selected randomly from the listing for each general practitioner. At the multivariate analysis, smoking (OR 3.7, 95% CI 1.7-8.0; $p<0.01$), diabetes mellitus (OR 3.6, 95% CI 1.7-7.6; $p<0.01$) and hypertension (OR 3.3, 95% CI 1.4-7.8; $p<0.01$) were associated with PAD. A coexistent cardiovascular disease was found in 48% of patients and 17% of controls (OR 4.6, 95% CI 2.4-8.8; $p<0.01$). At the multivariate analysis, only PAD was significantly associated with a previous cardiovascular event (OR 7.8, 95% CI 2.8-21.4; $p<0.01$). Of all cases of symptomatic PAD, 45% were unaware of their condition. No significant difference was observed between known and unknown cases.

Conclusion. This study seems to indicate that both prevalence and cardiovascular comorbidity of symptomatic PAD in Italy are lower than in Northern European and Northern American countries. Moreover, the finding that, PAD was unrecognized in about 50%

of affected individuals suggest that many patients accept leg complaints as a normal feature of ageing, and imply that a large proportion of PAD population is not given preventive therapy, so remaining at high cardiovascular risk. Thus, there is need to alert general practitioners to this topic.

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The Pivotal Link Between Hepatitis C Virus Infection and Increased Arterial Stiffness in Patients With End Stage Renal Failure

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Background: Recent reports have been emphasized a link between infection with micro-organism such as Chlamydia pneumoniae and cytomegalovirus, and an increased risk of cardiovascular and cerebrovascular diseases. Although the high prevalence of hepatitis C virus (HCV) infection in patients with end stage renal failure (ESRF) has been well-known, the role of HCV in pathogenesis of these atherosclerotic diseases is unclear. It has been recently reported that aortic pulse wave velocity (PWV), a marker of arterial stiffness, is a major predictor of mortality in ESRF patients. In this study, we evaluate the relationship of aortic PWV and HCV infection in patients with ESRF. **Methods:** Seventy-six outpatients (mean age: 64 years, 59 male, mean duration of dialysis treatment: 3517 days) undergoing chronic dialysis treatment in single center were examined. We measured their blood pressure and aortic PWV by VaSera VS-1000 (FUKUDA DENSHI, Japan), left ventricular mass index (LVMI) by echocardiography, serum HCV-RNA by RT-PCR, and plasma brain natriuretic peptide (BNP) by highly sensitive RIA. Determinants of aortic PWV were analyzed by multiple stepwise regression analysis. **Results:** Twenty patients (26%) were seropositive for HCV, and twelve patients (16%) had HCV viremia. Aortic PWV was significantly higher in patients with HCV viremia than those without it (11.7 ± 3.0 vs. 9.7 ± 2.2 m/sec, $p<0.01$). Serum transaminase levels were within normal limits in both groups. Using simple regression analysis, aortic PWV correlated significantly with age ($r^2=0.21$, $p<0.0001$), HbA1c ($r^2=0.32$, $p<0.0001$), mean blood pressure ($r^2=0.26$, $p<0.0001$), and did not correlate with duration of dialysis treatment, total cholesterol, C-reactive protein, creatinine, calcium X phosphorus product. Multiple regression analysis indicated that independent determinants of aortic PWV were age ($\beta=0.08$, $p<0.0001$), HbA1c ($\beta=1.09$, $p<0.0001$), mean blood pressure ($\beta=0.05$, $p<0.0001$), and the presence of HCV-RNA ($\beta=2.03$, $p<0.0001$) (multiple $R=0.88$). **Conclusion:** These data show for the first time that HCV infection is strongly associated with the progression of atherosclerosis in patients with ESRF.

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Severe Renal Artery Stenosis Is Common in Patients With Severe Thoracic Aortic Plaque

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Background: Atherosclerotic renal artery stenosis (RAS) is an underdiagnosed disorder, and is a potentially treatable etiology of hypertension and renal insufficiency. RAS may be a manifestation of generalized atherosclerosis. This study investigates the association of RAS, as detected by abdominal duplex ultrasonography, and thoracic aortic plaque, as detected by transesophageal echocardiography.

Methods: All pts were referred for transesophageal echocardiography for various clinical indications. Abdominal duplex ultrasound was performed on 67 patients: 42 with severe thoracic aortic plaque (≥ 4 mm) and 25 controls. The prevalence of RAS was determined in both groups. Severe RAS ($\geq 60\%$) was defined as flow velocity >1.8 m/sec and renal:aortic velocity ratio ≥ 3.5 . Clinical data regarding a history of hypertension, coronary artery disease, diabetes mellitus, smoking, dyslipidemia, stroke and peripheral embolization were recorded.

Results: The overall average age of the pts was 72.6 ± 9.7 yrs (57% male). There were 8 cases of RAS identified (all severe), all of them in the group of 42 patients with severe thoracic aortic plaque (19% vs. 0% with ≤ 2 mm plaque; $P=0.02$). In a paired analysis, matched for age and sex (McNemar), severe plaque was highly significantly associated with RAS ($P=0.008$). On univariate analysis, severe plaque ($P=0.001$) and hypertension ($P=0.05$) were correlated with RAS. On multivariate analysis (with plaque, hypertension, dyslipidemia and smoking in the model), severe plaque ($P=0.001$) and hypertension ($P=0.05$) remained independently correlated with RAS.

Conclusions: 1. Severe thoracic aortic plaque is strongly associated with RAS.

2. Pts found to have severe thoracic aortic plaque on TEE should be screened for RAS.

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Preoperative Hemodynamic Status as a Predictor of Surgical Mortality in Acute Type A Aortic Dissection Patients: Insights From the International Registry of Acute Aortic Dissection (IRAD)

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Background: Pre-operative hypotension or shock are known to predict adverse surgical outcomes in patients with acute type A aortic dissection (AAD). However, data evaluating preoperative hemodynamic status from onset of symptoms to surgery in large numbers of patients in the modern era are limited.

Methods: We categorized 526 patients (pts) submitted to surgery for AAD among 1032 pts enrolled in the IRAD between 1996 to 2001. Preoperative hemodynamic status was assessed at the clinical presentation of AAD, after hospitalization in the referral center and at surgery using standard Chi-square test or Student's T-test. These were correlated with in-hospital mortality.

Results: Data are showed in the table. Our study highlights the importance of hypoten-